

CLAIMS

1. A method for managing batches of immunocompetent cells
5 collected from human or animal subjects for deferred use, comprising for
each of said human or animal subjects the following steps :
- conditioning and preserving successively collected batches of
immunocompetent cells, into one or more storage centers, and
 - constituting and enhancing from collected batches a personal library
10 of immunocompetent cells, said personal library cumulating a sum of
immunity information stored in the walls of the collected immunocompetent
cells,
 - during successive collections or batches, gathering information
characteristic of the status of health and/or the psychological status of said
15 human or animal subject, said status-characterizing information being
obtained by processing measurements made on samples of blood and/or
fluid and secretions and/or hair collected said human or animal subject, said
status-characterizing information gathering being effected before or during
the immunocompetent cells collection,
 - 20 - processing said status-characterizing information for determining the
subject's identity data,
 - storing, all along said steps, the subject's identity data into a cell
management database,
 - upon a request for re-use from a cell treatment entity, performing an
25 identification of the personal batches of cells by consulting said cell
management database, and receiving from said cell management database
said subject's identity data obtained by successive status-characterizing
information processing,
 - determining parameters of a deferred-use protocol of said batches of
30 immunocompetent cells, by processing said successively collected subject's
identity data, and

- providing said cell treatment entity with said identified personal batches of cells and with said deferred-use protocol parameters.

5 **2.** The method according to claim 1, characterized in that the status-characterizing information comprise bioelectronic information resulting from processing respective measures of pH, oxidation-reduction potential Rh2 and resistivity ρ of blood previously collected on said human or animal subject (Vincent's bioelectronic method).

10 **3.** The method according to claim 1, characterized in that status-characterizing information comprise information obtained by processing sensible crystallization images of blood previously collected on said human or animal subject.

15 **4.** The method according to claim 1, characterized in that the status-characterizing information and the immunity information stored in the immunocompetent cells of said human or animal subjects are entered into an expert system used for determining parameters for deferred-use protocols.

20 **5.** The method according to claim 4, characterised in that said expert system is arranged for providing an interpretation of said status-characterizing information and said immunity information with respect to a particular gene.

25 **6.** The method according to claim 1, implemented in a therapeutic protocol including re-injecting lymphocytes on a human or animal subject, characterised in that the previously collected and preserved immunocompetent cells are submitted to an ex-vivo process before being re-injected.

30 **7.** The method according to claim 6, implemented in a therapeutic protocol including re-injecting lymphocytes T with a specific cytotoxic activity after ex-vivo expansion.

8. The method according to claim 6, implemented in a therapy protocol including a step for checking the harmlessness of the lymphocytes before re-injection.

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9. The method according to claim 8, implemented in a therapy protocol including a checking step comprising a test of the oxidative stress of the lymphocytes before re-injection, wherein said lymphocytes are aggressed by free radicals.

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10. The method according to claim 9, implemented in a therapy protocol including an oxidative stress test for checking various therapy ways for an ex vivo processing and suitability of said therapy ways with the concerned human or animal subject.

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11. The method according to claim 6, implemented in a therapy protocol including an ex vivo processing between lymphocytes and a vaccine before re-injection.

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12. The method according to claim 6, implemented in a therapy protocol including an ex vivo processing and an allergic desensitization of the lymphocytes before re-injection.

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13. The method according to claim 6, implemented in a therapy protocol including a step for re-injecting lymphocytes by the lymphatic way.

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14. The method according to claim 6, implemented in a therapy protocol for transfusing blood from a donor to a receiver, said protocol including substituting lymphocytes from said donor by lymphocytes from said receiver.

15. The method according to claim 1, implemented in a gene therapy protocol.

16. The method according to claim 1, characterized in that it further comprises, before the step for cryo-preserving a batch of immunocompetent cells, a step of cryogenizing said batch in view of annihilating antibodies present within said batch.

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17. The method according to claim 20, characterized in that it further comprises, before any re-use of a batch of immunocompetent cells previously collected, a step for checking the annihilation of the antibodies within said batch.

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18. The method according to claim 1, characterized in that it further comprises, during conditioning a batch of immunocompetent cells previously collected, a step for immunomagnetically selecting purified lymphocytes or monocytes.

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19. A system for managing batches of immunocompetent cells collected from human or animal subjects for their deferred use, said system comprising for each of said human or animal subjects :

20 - means for conditioning and preserving batches of immunocompetent cells successively collected, into one or more storage centers,

- means for constituting and enhancing from said collected batches a personal library of immunocompetent cells, said personal library cumulating a sum of immunity information stored in the walls of collected immunocompetent cells,

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- means for gathering, during successive collections of batches, information that are characteristic of said human or animal subject's status of health and/or psychological status, before or during immunocompetent cells collection, said status characterizing information being obtained by processing measurements made on samples of blood and/or fluid and secretions and/or hair collected on said human or animal subject,

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- means for processing said status-characterizing information in view of determining said subject's identity data,

- means for storing said subject's identity data successively determined into a cell management database,

- means for performing, upon a request for re-use from a cell treatment entity, an identification of the personal batches of cells to including means for consulting said cell management database,

- means for determining parameters of a deferred-use protocol for said batches of immunocompetent cells from said human or animal subject's personal library, by processing said successively collected subject's identity data, and

- means for providing said cell treatment entity with said identified personal batches of cells and with said determined deferred-use protocol parameters.

20. The system according to claim 19, characterized in that it further comprises means for getting status-characterizing by processing a blood sample collected on said human or animal subject.

21. The system according to claim 20, characterized in that it further comprises means for getting bio-electronic information by processing respective measures of the pH, the oxidation-reduction potential and the resistivity of blood previously collected on said human or animal subject.

22. The system according to claim 19, characterized in that it further comprises means for getting information from a capillary study on elements of said human or animal subject's hair system.

23. The system according to claim 19, characterized in that it further comprises means for controlling and enhancing an expert system from information characteristic of the status of human or animal subject's and from immunity information stored in said human or animal subject's immunocompetent cells, in view of determining parameters for deferred-use protocols.

24. The system according to claim 23, characterized in that it further comprises means for providing an interpretation of said human or animal subject's status-characterizing information and said immunity information, with respect of a particular gene.

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25. A method for determining parameters of a protocol for a deferred use of immunocompetent cells from a human or animal subject's personal library, said personal library cumulating a sum of immunity information stored in the walls of the immunocompetent cells successively collected and
10 conditioned under the form of batches preserved in one or more storage centers, characterized in that said method comprises :

- measuring physical and/or biological characteristics done on samples of fluid and/or hair from said human or animal subject before or during the collection of immunocompetent cells,
- 15 - collecting information characteristic of the status of health and/or the physiological status of said human or animal subject's status resulting from said measurements, said status characterizing information being obtained by processing measurements made on samples of blood and/or fluid and secretions and/or collected on said human or animal subject,
- 20 - processing said characteristic information in an information system for determining parameters of said deferred-use protocol, and
- storing said processed information in a cell management data base.

26. A system for determining parameters of a protocol for a deferred
25 use immunocompetent cells from a human or animal subject's personal library, said personal library cumulating a sum of immunity information stored in the walls of the immunocompetent cells successively collected and conditioned under the form of batches preserved in one or more storage centers, characterized in that said system comprises :

- 30 - means for measuring physical and/or biological characteristics done on samples of fluid and/or hair from said human or animal subject before or during the collection of immunocompetent cells,

- means for collecting information characteristic of the status of health and/or the psychological status of said human or animal subject's status resulting from said measurements, said status characterizing information being obtained by processing measurements made on samples of blood and/or fluid secretions and/or hair collected on said human or animal subject,
- 5 - means for processing said characteristic information in an information system to determine parameters of said deferred-use protocol, and
- means for storing said processed information in a cell management
- 10 data base.